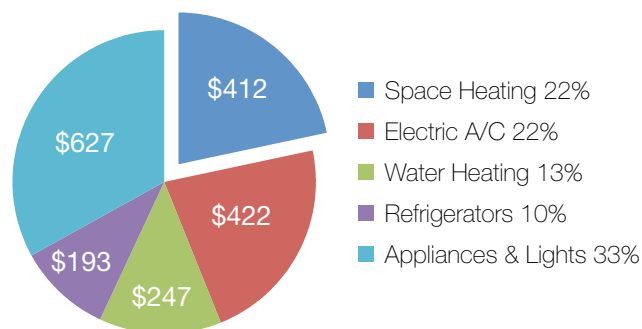


# HEATING

If you're like most Arkansans, the cost of heating is a large portion of your wintertime utility budget. In fact, the average Arkansas household spends about \$412 a year on heating costs (see figure 1). Whether you are a homeowner or renter, you can reduce your energy costs without sacrificing comfort. Surprising savings can be achieved through basic energy efficiency measures, many of which have little or no cost. Other energy improvements may require a larger investment, but they typically pay for themselves in the form of energy savings within a few years — then, its money in your pocket!

figure 1

Average Annual Utility Costs



Source: Energy Information Administration 2001 Residential Energy Consumption Survey Applying 2007 Average Utility Costs

## No Cost

- **Turn down the thermostat.** For every degree you lower your thermostat you will save up to 5 percent on heating costs. In Arkansas, lowering it just one degree can save you \$14 to \$26 a year.
- **Let the sunshine in.** Open south-facing window coverings during the day to let in free heat from the sun. Close all draperies and shades at night to reduce heat loss.
- **Don't block the flow.** Move furniture and other objects away from heating registers to prevent the blockage of heat.
- **Don't let heat go up the chimney.** A fireplace is a very inefficient heating system and can account for about 14 percent of the cold air entering your home, which increases

your heating costs. Make sure that the fireplace damper and glass doors are closed when the fireplace is not in use — until you close them, warm air escapes 24 hours a day.

## Myths and Facts

- Myth:** When I turn down my thermostat at night, it takes more energy to reheat the house in the morning when I turn the thermostat back up.
- Fact:** No matter how long you will be gone or asleep, you will save energy by turning down the thermostat.\* Heat escapes faster when there is a bigger difference between indoor and outdoor temperatures. When you turn down the thermostat, the indoor temperature is closer to the outdoor temperature, the furnace runs less and you lose less heat and save energy. In the morning, the furnace will run a little longer to bring the house back to temperature; however, the nighttime energy savings is much greater than the energy needed to re-heat the home.

\*Consult the owner's manual before varying temperature over 3° on a heat pump

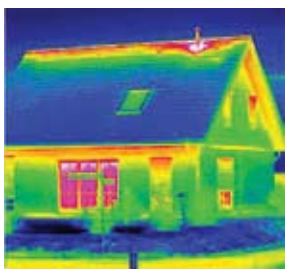
- Myth:** The higher the thermostat is set, the faster the furnace will heat the house.
- Fact:** Most furnaces deliver heat at the same rate, no matter how high the thermostat is set. Just set the thermostat to the temperature you'd like and your furnace will heat your home as fast as it can.
- Myth:** Replacing all my windows is the best investment.
- Fact:** If your windows show signs of significant deterioration (rot, corrosion, weather damage), they probably need to be replaced. However, a new window only cuts window energy loss in half, and the area of the windows only accounts for a small percent of the building "envelope." Therefore, insulation and air sealing are first priority investments.

# HEATING

## Low Cost

- **Tune-up the heating system.** Call your heating contractor to schedule a tune-up before the heating season begins. A simple tune-up can increase a furnace's heating efficiency and reduce heating costs from 5 to 10 percent saving \$21 to \$41 per year.
- **Change the furnace filter every month.** This will help your furnace to run more efficiently, keep your air cleaner, and prolong the life of your heating and cooling system. A dirty or clogged filter will demand more energy and slow down the heating process, which can increase heating costs by 10 percent or \$41 per year.
- **Reduce air leakage.** Drafts around windows, doors, pipes, electrical light switches and outlets can account for more than 10 percent of home heating costs. One of the quickest dollar-saving tasks you can do is caulk, seal, and weatherstrip all seams, cracks, and openings to the outside. Large leaks are often tucked away in unlikely spots around chimney pipe openings, recessed lights, wiring, and plumbing (see figure 2 – Infrared photo showing heat loss).
- **Install a programmable thermostat.** This is a convenience that turns your heating system on and off based on the times and temperatures that are set by you. A programmable thermostat costs under \$100, is easy to install, and can save from \$70 to \$115 a year on your home heating costs.
- **Seal the ductwork.** Check the ductwork for disconnects, leakage, and insulation. Sealing the leaks can reduce heating costs from 10 to 20 percent. To seal, use duct mastic or UL approved duct-sealing tape (don't use what is commonly called "duct tape"). Cover and tape the ducts with duct insulation.

figure 2



Color signifies areas of heat loss.

least —————> most

## Investment

- **Caulk and seal before insulating.** Before adding more insulation or installing new insulation anywhere in the home, first seal all holes where air might leak. Typical insulation does not stop the flow of air, it only slows the loss of heat.
- **Insulate the attic.** If the insulation in your attic is six inches or less (R-19 or less) then your attic needs more insulation. An R-30 is recommended throughout most of Arkansas and in northwest Arkansas R-38 is recommended.
- **Insulate the floor over your crawlspace.** Up to 25 percent of the cost to heat your home is lost through uninsulated floors. Adding R-19 floor insulation will reduce your heating costs and keep your feet warm.

## Replacement

- **Replace your furnace if it is over 15 years old** — replace it before it breaks. Make all of the efficiency improvements first (insulation, caulking, air sealing), which will reduce the heating requirements for your home. Shop around and get bids from several licensed heating and air conditioning contractors. Caution: Bigger is not better — require each contractor to perform a heating and cooling load analysis (a Manual J or equivalent load sizing on your home). Don't buy a system that is bigger than you need because it will use more energy and provide less comfort.
- **Purchase the most energy efficient heating system you can afford.** The National Appliance Efficiency Standards requires a minimum efficiency of 78 percent Annual Fuel Utilization Efficiency (AFUE) for natural gas furnaces, and 7.7 Heating System Performance Factor (HSPF) for heat pumps. Energy Star labeled heating systems will be at least 20 percent more efficient than old furnaces.

This Fact Sheet was developed for Energy Efficiency Arkansas (EEA), a partnership between the Arkansas Energy Office and Arkansas's investor-owned electric and gas utilities and electric cooperatives, to provide Arkansans with unbiased information about cost effective energy efficient practices, improvements and technologies. For further information go to [www.EnergyEfficiencyArkansas.org](http://www.EnergyEfficiencyArkansas.org).